said crosslinking agent is hydrophilic and reacts with water to form an alcohol.

3. A bed of cross linked gel as claimed in claim **1** which is soft and elastic.

4. A gel of claim **1**, wherein the linear polysaccharide is agarose.

5. A gel of claim **1**, wherein the linear polysaccharide is hydroxyethyl cellulose.

6. A gel of claim **1**, wherein the linear polysaccharide is hydroxyethyl agarose.

7. A gel of claim **1** comprising a linear polysaccharide and at least one additional polysaccharide.

8. A gel of claim **7**, comprising linear polysaccharide is agarose and the branched polysacharide is dextran.

9. A gel of claim **7**, comprising the linear polysaccharide is agarose and the branched polysaccharide is starch.

10. A gel of claim **1** wherein said linear polysaccharide comprises agarose and hydroxyethyl cellulose.

11. A gel according to claim **1** comprising at least one synthetic polymer with hydroxyl groups and said linear polysaccharide.

12. A gel of claim **11**, wherein the synthetic polymer is polyvinyl alcohol.

13. A gel according to claim **1** wherein the cross-linker is at least one member selected from a group of compounds consisting of dihaloalkyl alcohols, halohydrins, bisepoxides, divinyl sulfone, alkanediol dialkyl sulfonates, and alkanediol diaryl sulfonates.

14. A gel of claim **13**, wherein substantially simultaneous cross-linker reaction and gel formation is carried out at pH values from 8 to 14.

15. A gel of claim **13**, wherein substantially simultaneous cross-linker reaction and gel formation is carried out at temperatures from 4° to 65° C.

16. A gel of claim **13**, wherein substantially simultaneous cross-linker reaction and gel formation is carried out for periods varying from 15 minutes to 5 days.

17. A gel according to claim **13**, wherein the cross-linker reaction and gel formation is carried out in water as solvent.

18. A gel according to claim **13**, wherein the cross-linker reaction and gel formation is carried out in a water-organic solvent mixture.

19. The combination of a gel according to claim **1** and a support fixed thereto.

20. The combination claimed in claim **19** made by a process in which, during said substantially simultaneous cross-linking reaction and gelation, said solution of said polysaccharide is in effective contact with said supporting article having at least one surface to which said gel becomes affixed.

21. The gel as claimed in claim **1** which is substantially uncharged.

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